



NATURAL RESOURCES DIVISION

ARKANSAS NATURAL RESOURCES COMMISSION APPLICATION FOR DAM PERMIT

- PROPOSED DAM
- EXISTING DAM

DATE BUILT: _____

OWNER

PROJECT ENGINEER / FIRM

Owner Name _____

Name of Engineer _____

Organization _____

Firm _____

Street Address _____

Street Address _____

City, State, Zip _____

City, State, Zip _____

Phone: _____

Phone: _____

Email: _____

Email: _____

I. LOCATION OF DAM

(center of dam crest at center of stream)

County _____

1/4, 1/4, (section, township, range) _____

Latitude in degree, minutes, seconds OR decimal degrees _____

Longitude in degree, minutes, seconds OR decimal degrees _____

Name of USGS Quadrangle Map: _____

The stream on which the dam is to be constructed: _____

a tributary of _____, within the _____ river basin.

II. RESERVOIR VOLUME – AREA – ELEVATION

	Volume (Ac-ft)	Area (Acres)	Elevation (feet)
Original Streambed at toe of dam	_____	_____	_____
Sediment Pool	_____	_____	_____
Normal Storage	_____	_____	_____
Emergency Spillway Crest	_____	_____	_____
Maximum Design Storage	_____	_____	_____
Effective Crest of Dam	_____	_____	_____

III. PARAMETERS: SPILLWAY, HEIGHTS, WATERSHED

Maximum Emergency Spillway Discharge: _____ (cfs)

Length of Dam: _____ ft. (Along centerline of crest, include spillways if integral to dam.)

Height of Dam: _____ ft. (Vertical distance from original streambed at toe of dam to lowest point on crest of dam excluding spillways.)

Structural Height of Dam: _____ ft. (Vertical distance from lowest point of excavated foundation to lowest point on crest.)

Hydraulic Height: _____ ft. (Vertical distance from lowest point in original streambed at toe of dam to maximum design water level.)

Watershed Area: _____ square miles.

IV. SIZE CLASSIFICATION

(based on the more stringent of height of dam or maximum storage)

Size	Maximum Storage (Acre-Feet)	Height (Feet)
<input type="checkbox"/> Small	50 to 1000	24 to 40
<input type="checkbox"/> Intermediate	≥ 1000 and < 50,000	≥40 and < 100
<input type="checkbox"/> Large	≥ 50,000	≥ 100

V. HAZARD CLASSIFICATION

(based on the more stringent of potential loss of human life or economic loss)

Classification	Loss of Human Life	Economic Loss
<input type="checkbox"/> Low	No	Minimal (No significant structures; pastures, woodland, or largely undeveloped land); less than \$100,000.
<input type="checkbox"/> Significant	No	Appreciable (Significant structures, industrial, or commercial development, or cropland); \$100,000 to \$500,000.
<input type="checkbox"/> High	Yes	Excessive (Extensive public, industrial, commercial, or agricultural development); over \$500,000.

VI. DESIGN CRITERIA

All dams must be designed in accordance with ANRC's hydrologic criteria for dams, based on size and hazard classifications.
(Title 7: Arkansas Natural Resources Commission Rules Governing Design and Operation of Dams, Subtitle V, Design Criteria).

Does the SDF meet minimum criteria as shown in Table 1 below? YES NO

If **NO**, attach dam breach analyses showing that dam failure during the SDF would cause an increase in flood level of one foot or less at, and downstream of, the first habitable structure or financially significant development.

Probable Maximum Flood _____ cfs Source of PMF: _____

Spillway Design Flood: _____ cfs

Table 1: Minimum Spillway Design Flood for Dams		
Hazard Classification	Size Classification	Spillway Design Flood
Low	Small	.25 PMF
	Intermediate	.25 to .50 PMF
	Large	.50 to .75 PMF
Significant	Small	.25 to .50 PMF
	Intermediate	.50 to PMF
	Large	PMF
High	Small	.50 PMF to 1.0 PMF
	Intermediate	PMF
	Large	PMF

Note: Where ranges are given in this table, the spillway design flood shall be determined by straight line interpolation, based upon the effective height of dam or maximum storage, whichever computed SDF is greater.

VII. PURPOSE OF DAM

Indicate the major purpose(s), in approximate percentage(s), to be made of the storage volume:

- | | | | |
|-----------------------|---------|---|---------|
| (a) Municipal | _____ % | (h) Hydroelectric | _____ % |
| (b) Industrial | _____ % | (i) Flood control / Stormwater management | _____ % |
| (c) Irrigation | _____ % | (j) Navigation | _____ % |
| (d) Aquaculture | _____ % | (k) Fire protection | _____ % |
| (e) Recreation | _____ % | (l) Debris control | _____ % |
| (f) Livestock | _____ % | (m) Tailings | _____ % |
| (g) Fish and Wildlife | _____ % | (n) Other | _____ % |

Estimated amount of water to be withdrawn per year: _____ (acre-feet).

Maximum withdrawal rate: _____ (gpm)

VIII. REQUIRED ATTACHMENTS

- 1. Preliminary plans which have been prepared by a Registered Professional Engineer or and authorized agent of the United States Government. Plans must include USGS Quadrangle or County Maps or drawings showing:
 - A. Exact location of the structure
 - B. Outline of impounded water
 - C. Outline of watershed
 - D. Access roads to all major facilities
 - E. Property lines
 - F. Utility lines
 - G. Cross section of dam at deepest section
 - H. Location, elevation, and size of spillways
 - I. Elevation-volume relationship
 - J. Elevation-discharge relationships
- 2. Description of watershed including land use, soil types, slopes, and ground cover.
- 3. Description of downstream area subject to damage in the event of a dam failure. Include:
 - A. Name of nearest affected city/town downstream and distance from the dam along the stream.
 - B. Number and types of buildings and their distance from the dam.
 - C. If homes may be affected, number of persons involved.
 - D. Description of roads or utilities affected.
 - E. Distance from dam to downstream property line along the stream.
- 4. Describe arrangements for access to dam for inspection, during and after construction.
- 5. Proposed construction schedule.

IX. ENGINEER CERTIFICATION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Arkansas.

Signature

Typed or Printed Name

Date

License No.

PLACE
SEAL
HERE

X. APPLICANT CERTIFICATION

THE APPLICANT CERTIFIES AND/OR AGREES TO THE FOLLOWING:

All information presented in this application is correct and accurate.

The applicant agrees to comply with state law and commission regulations governing design, construction, operation and maintenance of dams. In addition, the applicant understands that failure to comply with applicable laws and regulations may result in cancellation of dam permit and assessment of fines not to exceed \$10,000.

That prior to construction, the applicant will obtain all land rights or easements necessary for the construction and operation of the above-described structure.

Construction shall not begin until final plans and specifications have been reviewed and approved by the Commission's Chief Engineer.

Construction and operation shall be in accordance with maps, plans, specifications filed and approved by the Commission.

Water shall not be deliberately impounded by closing of gates until issuance of an operation permit by the Commission's Chief Engineer.

Representatives of the Commission shall have the right, at any reasonable time, to enter upon the land where the dam is located to inspect the work of construction thereof or the operation and maintenance after construction.

An estimated review fee of one percent (1%) of the estimated cost of construction, (but not less than \$100 nor more than \$1,000) must accompany this application. (No review fee is required for existing dams);

The estimated cost of construction, excluding land, engineering, and legal fees is: \$ _____

A check in the amount of \$ _____ and payable to the Arkansas Natural Resources Commission is enclosed;

Upon permit issuance, the applicant shall pay annually to the Commission a fee of twelve cents (\$0.12) per acre-foot of water impounded at normal pool, excluding storage designated for sediment accumulation over the life of the project, but not less than twenty-five dollars (\$25.00) nor more than ten thousand dollars (\$10,000).

Nothing in the permit shall be construed to impose liability on the State, the Commission, or its agents or employees for partial or total failure of this dam and reservoir.

Signature

Typed or Printed Name

Date

Please forward this form with required attachments (Part VIII) to:

Whit Montague, PE, CFM
Dam Safety Section
Arkansas Department of Agriculture
Natural Resources Division
10421 West Markham Street
Little Rock, AR 72205

Submittals may also be transferred electronically to whitney.montague@agriculture.arkansas.gov.

Please contact Ms. Montague with questions regarding this form via email or at 501 682-3969.